

COLONY OF



NORTH BORNEO

# MEDICAL DEPARTMENT ANNUAL REPORT 1954



*By*

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# COLONY OF NORTH BORNEO

## DEPARTMENTAL ANNUAL REPORT

### PUBLIC HEALTH

#### General Health

In so far as no outbreaks of major infectious disease occurred in the Colony during the year 1954, and indeed no case of any of the major epidemic diseases occurred, it may be said that the year was a healthy one. Nonetheless, certain important diseases causing chronic ill health and diminished economic efficiency continue to exert their effect. These are primarily malaria, tuberculosis and intestinal infestations. There is evidence of an increasing public concern as to the effects of these diseases, particularly in the case of tuberculosis. The demand for modern drugs to treat tuberculosis has increased threefold in the past two years, and improved X-ray and other diagnostic facilities have brought to light many new cases, previously suspected but not proved. The examination of contacts of known cases has further disclosed other cases. In view of the difficulties encountered in obtaining adequate statistical information it cannot be concluded that the increased numbers treated really represent a great increase in the disease.

Reported cases of tuberculosis for the year were 755 and 5,272 for malaria. These figures are derived from the returns sent in from the seven major stations at which Medical Officers are posted, and may thus be regarded as being reasonably accurate. It is of interest to note that from all the stations including those where the returns and reporting are done by trained nurses and dressers without medical qualification, the figures amount to 1,150 for tuberculosis and 34,811 for malaria.

A further rough estimate of the incidence of these two diseases may be gauged from the figures submitted in respect of "chronic bronchitis," which were 8,085 and "anaemia" which were 8,735. Naturally not all the chronic bronchitis can be assumed to be tuberculosis, and nor can all the anaemia be regarded as the result of malaria, but the figures are instructive.



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1954

A disease which has hitherto not received much mention in these reports is scrub typhus. This undoubtedly exists, and 9 confirmed cases were reported. An Anglo-American research team spent some time in the Colony in 1953 when a number of potential vectors were identified, and this team is expected to return for further investigations in 1955.

All Medical Officers report that the incidence of the large tropical ulcers so common in the immediate post-war period, and even down to 1952, has substantially decreased.

Filariasis occurs in certain isolated "pockets" which are now becoming better defined. The residual spraying of insecticides planned under the malaria control scheme for 1955 will, it is confidently hoped, reduce substantially this disease also.

With improving sanitation consequent upon the rebuilding of many of the larger population centres throughout the Colony and public works designed to improve water supplies and drainage, it is reasonable to expect steady improvement in public health. From most of the Medical Officers' reports on the general health of the population indicate a slow improvement. The vaccinal state of the population in seaport towns who are most exposed to the risk of introduced smallpox is fairly good. Small outbreaks of minor epidemic disease are reported from various centres, but none of them assumed epidemic proportions. An outbreak of influenza followed by pneumonia was reported in Keningau, but it was also remarked that this responded extremely well to treatment. It is customary with some of the indigenous inhabitants, who find themselves to be suffering from fever, whether caused by malaria or by some upper respiratory tract infection, to immerse their bodies in the nearest river with the object of cooling themselves. Unfortunately this often leads to pneumonia. From Kudat an increased number of cases of diarrhoea and vomiting among children was reported, very possibly due to the shortage of good water supplies. It is frequently noticed that an unusually dry spell, coupled with the fruit season, leads to such outbreaks.





Almost all stations report that though there are still small pockets of yaws in various places, there is no doubt whatever that the disease is substantially less than in previous years.

Although few in numbers comparatively, there is a steady flow of patients to hospitals seeking treatment for eye diseases. Many of these are the results of infection, and the eye is often destroyed or irreparably damaged before treatment in hospital can be begun. This state of affairs should be improved in future with the appointment of an Inter-Territorial Ophthalmologist, due to begin work in 1955.

### Vital Statistics

During 1953 the printed report of the Census held in 1951 became available and has been of great value in assessing the public health needs of the Colony. The census report particularly remarked on the striking differences in the survival rate of children in different communities. It was remarked that almost 93% of Chinese children survived, whereas for natives in general other than Muruts, a comparable figure is 70% and for Muruts in particular whose birth rate was in any case shown to be very much lower than the other races, only 50%. It was for this reason that the Government requested the services of a social anthropologist and a medical investigator for the express purpose of investigating the causes of the decline of the Muruts. Both these specialists have been at work in North Borneo during the year 1954, and it is expected that they will continue their studies into 1955. No conclusions can yet be reached regarding the causes of the decline of the Murut population, but both investigators remark that there is no doubt that sterility appears to be a real problem in some places. Throughout the Colony the neonatal and infantile mortality rates are known to be high, and it is thought that malaria is responsible for a great deal of this. Nevertheless Medical Officers, particularly from the Beaufort, Keningau and Kudat districts, report a steady improvement, in that the birth rates appear to have increased, and the death rates to have decreased. Similarly all stations report a steady downward trend in infant mortality.





Registration of births and deaths continues to improve, but still leaves much to be desired, particularly among the less literate sections of the population. For this reason statistics relating to such matters as maternal and infant mortality and morbidity from various causes are not reliable. In the larger centres and where certification is made by a medical practitioner, the figures are naturally a great deal more accurate. Unfortunately the rural and less literate people are those who stand most in need of medical assistance and public health measures. In certain districts where medical officers have been able to compile reasonably accurate reports it seems that the neonatal and infantile death rates are in fact declining. This is particularly noticeable in districts well served by maternal and child welfare clinics. For example in the Keningau area comparative figures are:-

Infantile Deaths per 1000 live births

<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>
129.4	100.0	100.7	84.1

The figures showing the number of births and deaths registered in 1950, 1951, 1952, 1953 and 1954 are given below:

	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>
Births registered	9,064	10,435	11,457	11,155	12,115
Deaths registered	4,320	4,503	4,395	4,405	3,918
Excess of Births over Deaths	4,744	5,932	7,062	6,750	8,197

The total estimated population at the end of 1954 was 367,757.

Malaria Control

Malaria continues to be one of the most serious single causes of ill health in the Colony. This disease is not common in the towns and built-up areas, but does affect - severely, in many cases - the rural population. These people are those primarily engaged in agriculture of upon whom much of the economic welfare of the Colony greatly depends. A pilot scheme for the control of malaria is expected to begin in the



middle of 1955. This scheme is jointly sponsored by the Government, the World Health Organisation and the United Nations International Children's Fund. The project aims at the eradication of malaria by the spraying of dwelling houses with residual insecticides. It is also intended to construct from information already available and by means of investigations on the spot, a malaria map of the Colony. It is already highly probable that the vector of malaria in most places is A. leucosphyrus. That malaria is a serious problem throughout the Colony, is shown by the reported figures for the year which are 34,811. Comparatively few cases of cerebral malaria are reported, and blackwater fever may now be considered as very rare.

Should the pilot scheme prove effective, then it is intended that residual spraying should be extended to cover the entire Colony. Encouraging results so far obtained in a similar scheme in the adjacent territory of Sarawak make it seem possible that the methods to be employed will prove successful.

#### Tuberculosis

Although more persons suffer from malaria than tuberculosis, yet, at the same time, pulmonary tuberculosis causes much prolonged ill health in the Colony today. The malaria sufferer, if treated, recovers comparatively quickly, whereas it is very difficult to persuade tuberculosis patients to continue the prolonged course of treatment necessary. The reports of Medical Officers who deal with cases of the disease, the results of routine examinations and the investigations undertaken by voluntary social workers, all point to the incidence of the disease being high. The North Borneo Anti-Tuberculosis Association (NOBATA), originally formed in the year 1953, has continued its good work in 1954. The Association is most active in propaganda designed to prevent tuberculosis, and spends a very large proportion of its funds on relief and welfare work among sufferers from tuberculosis and their dependants.

Departmental resources for the diagnosis of tuberculosis have been strengthened by the acquisition during the year of an Odelca 70 m.m. Mirror Camera for use with the





new X-ray equipment available in the Jesselton Hospital. A new X-ray plant was installed towards the end of the year in the Duchess of Kent Hospital, Sandakan.

It is confidently hoped that, by means of the Odelca camera, it will be possible, firstly, to increase substantially the number of persons whose chests are examined by X-rays and, secondly, to reduce proportionately the large sums spent annually on X-ray films.

The Government propose that at various centres throughout the Colony, special wards for the treatment of tuberculosis patients should be erected. These will be of light construction, airy, well ventilated and will provide, in addition to sanatorium treatment, an element of rehabilitation for the tuberculous. This will relieve the strain on the general hospitals, and at the same time make more beds available for treatment and rehabilitation.

#### Intestinal Disorders

As in all tropical countries where standards of hygiene and sanitation are low, bowel infections form a high proportion of the diseases encountered. However, improved sanitation both as regards disposal of night soil and refuse, and improved water supplies, will substantially reduce the number of bowel diseases in the urban areas. The rural community still rely on unprotected wells and polluted rivers and streams as sources of water, whilst the disposal of excreta in most rural areas is unsatisfactory. A large proportion of the general population harbours more than one kind of intestinal parasite, although serious epidemics of bowel infections are remarkably rare. It is by no means clear why epidemics of bowel diseases are comparatively rare. One possibility is that, in the absence of sufficient qualified medical staff, cases of typhoid fever, for example, pass unrecognised and undiagnosed and are merely recorded as "fever". On the other hand, the theory has been advanced that, by reason of the heavy rainfall almost daily, rubbish and excreta are washed away at frequent intervals. It is noticeable that flies are not as numerous as might at first





sight be expected, and the possible explanation is that their ova and larvae are vulnerable both to the heavy rainfall and to the large numbers of ants which are found everywhere.

There is an apparent increase in amoebiasis. Most stations report that the disease is common and frequently discovered on routine examination of stool specimens. Medical Officers report that, in view of the low standards of environmental hygiene in various small towns, it is perhaps surprising that there is not more. All Medical Officers are unanimous in reporting a heavy worm infestation of almost every person presenting himself for treatment at hospitals and dispensaries. The commonest types of worm infestation are those caused by Ascaris lumbricoides and Ankylostomes; and in most cases at least a double infection exists.

#### General Sanitation and Preventive Measures

10 Health Inspectors were under tuition throughout the year 1954, and were due to complete their training in the early part of 1955. They have been taught by a qualified teacher made available through the generous assistance of the Colombo Plan. The course of training has been practical as well as theoretical and the probationer inspectors have taken the opportunity, as a part of their training, of investigating special public health problems as they have arisen.

Towards the end of 1953 the World Health Organisation provided a Consultant Sanitary Engineer to look into and advise the Public Works and Medical Department on environmental sanitation, with particular reference to urban sewage disposal. A second engineer was made available during 1954, and the work of planning modern sanitation for the major towns has progressed well.

Routine Port Health work was carried on throughout the year with no special matters of interest to report. The Colony is well protected in regard to shipping arriving from Singapore, which has already been thoroughly screened. The major potential danger would seem to lie in small coastal



vessels and fishing boats arriving at isolated spots along the coast from neighbouring territories.

### Nutrition

Starvation as such has been practically unknown in the Colony since the Japanese occupation, but many of the rural population fail to appreciate the necessity to include fruit and vegetables in their diet and as a result cases of avitaminosis are met with here and there. The remedy lies in proper education, particularly that of the housewife. To this end advice and diet supplements are made available at the Health Centres and Government dispensaries throughout the Colony, and, through the generous assistance of UNICEF, Maternal and Child Welfare Clinics and Health Centres have received additional supplies. As a result of these drug and diet supplements, attendances at all the clinics have greatly increased. UNICEF has agreed to continue for a further 2 years these supplies on a similar scale. It is noteworthy that surprisingly large quantities of Vitamins B 1, B 12 and C are regularly required at the various hospitals and dispensaries. With improving health education, it should be possible in some measure to reduce the demands for supplies of these vitamins. Supplies of fat soluble vitamins are also in considerable demand. This is less surprising since, apart from fish liver oils, there are few sources of supply of natural Vitamin A available to the public. Medical Officers report that on the whole, nutrition appears to have improved during the year, although as has already been stated, little advantage is taken of the supplies of fresh vegetables and fruits which are grown or which might be grown. In certain inland districts the introduction of fish ponds has met with success. It is also remarked that those persons who live in the coastal districts and who have access to plentiful and cheap supplies of fish are on the whole better nourished than those living in the interior.

### Government Hospitals and Dispensaries

There are two major hospitals in the Colony situated at Jesselton and Sandakan. Their total number of beds amounts to 350. At these General Hospitals, provision is made for full medical and surgical care of patients. Very adequate





operating theatre facilities, X-ray departments, and laboratories are available; and special wards are set aside for maternity cases, for children, and for the treatment of acutely ill tuberculosis patients and other infectious diseases. Nevertheless such are the increasing needs of modern methods of medical and surgical care that additional equipment is always in demand. This is particularly so in the case of apparatus for physiotherapy.

There are, in addition, 5 cottage hospitals totalling 192 beds, at each of which a Medical Officer is stationed. By reason of limitations of staff, it has not been possible to staff each of these hospitals with a Medical Officer throughout the year, but 4 Medical Officers have been available for the 5 hospitals. Each of these smaller hospitals acts as a centre for the surrounding districts which are regularly toured by the Medical Officer-in-Charge, or by his subordinate staff.

There are 10 Outstation dispensaries with rest-beds to the number of 156 beds in all, which are under the charge of a senior trained dresser and regularly visited by a Medical Officer. In addition, there are 11 smaller dispensaries at which out-patient treatment is available but at which no beds for in-patients are provided.

During the year 12,060 in-patients were treated as compared with 10,933. In 1953 out-patients numbered 280,812 as compared with 271,715. New hospital buildings were completed in Labuan where a new operating theatre and out-patients' department were erected. In Beaufort a new out-patients' department, Dressers' quarters and Attendants' quarters were built and in Kudat an X-ray room and X-ray plant were installed. In Tawau an X-ray room and plant were installed and the hospital buildings provided with electric light and an adequate piped water supply.

The two major health centres in Jesselton and Sandakan continued work on an expanding scale throughout the year. These centres are designed to provide antē and post-natal clinics and infant welfare clinics in the two large population centres. Despite the fact that in certain interior





districts the population increase appears to be comparatively small or even so low that certain communities are in danger of actually diminishing, it is evident that in the larger population centres, and particularly amongst the Chinese, there is a real demand for assistance in family limitation.

Both centres receive support and assistance from the local branches of the British Red Cross Society and the St. John Ambulance Association.

The new nurses' quarters in Jesselton were completed during 1954 and it is expected that they will be occupied early in 1955, although the Jesselton Hospital new buildings were not yet begun by the end of the year.

#### Travelling Clinics

Regular travelling is done from all the hospitals and dispensaries where departmental staff are posted. In certain districts, of which Keningau is the most notable, travelling has increased three to four-fold in the past year, and this is reflected in reports of improved health of the population. The Keningau district has for some years been a centre for the training of village midwives. At 7 main centres and 7 sub-centres drug and diet supplements have been made available by UNICEF, and in addition to the good results of treatment now seen, these increased supplies have resulted in increased attendances at all the clinics concerned.

#### Ambulances

Two new light ambulances were acquired during the year, one of which is stationed at Jesselton and the other at Kudat in replacement of worn out vehicles. A plan has been drawn up for the replacement of ambulances throughout the Colony on a 5-year Colonial Development and Welfare plan.

#### School Health

The enactment during the year of a new Education Ordinance and Rules made thereunder, should go far to improve



the health of schoolchildren. Improved provision is made for sanitation at all schools and for the regular medical inspection of teachers and pupils. In particular, schoolteachers will be expected to submit to X-ray examination of the chest every year. The new Ordinance also gives increased powers to Medical Officers and various subordinate members of the Health Department staff to visit and inspect schools, as well as improving school conditions generally as regards health.

#### Leper Settlement

The Leper Settlement which is situated on Berhala Island in Sandakan harbour has held an average of 50 patients throughout the year. The inmates, who have greatly benefited from the introduction of modern methods of treatment, occupy themselves in fishing, boat building and agriculture. A voluntary welfare committee is very active in providing comforts and occupational diversion for the inmates. That leprosy is not a serious public health problem is indicated by the fact that an average of only four new lepers is admitted each year.

The buildings in the Leper Settlement are of temporary construction and are scheduled for replacement. The opportunity will be taken to rebuild the whole settlement at a better site on the island, which is more spacious and will give better facilities for agricultural pursuits. As may be expected some difficulty is experienced in placing cured lepers back into useful occupations. In this, however, the Leper Welfare Relief Committee is of the greatest assistance. Certain unfortunate individuals, who although cured, are so handicapped that they cannot earn their own living, present a special problem.

#### Mental Hospital

For some time past, conditions at the Mental Hospital in Sandakan have given cause for anxiety. Approximately 100 mental patients are normally housed in this hospital, but the buildings are old and ill suited to the purpose. Such repairs and renovations as have been possible were completed in 1954, but the provision of a new mental hospital is an urgent necessity,





and the Government has plans well advanced for a completely new mental hospital to be built on a site adjacent to the new Duchess of Kent Hospital in Sandakan. The staff of this Hospital was due to be strengthened by the arrival, early in 1955, of a fully trained male mental nurse. Most of the patients admitted to the Mental Hospital are suffering from some intercurrent disease. Many of them are toxic and almost all need treatment for malaria, anaemia and intestinal parasites. Once this has been achieved, the individual generally responds very well to further treatment. With the improvement in general conditions, it is hoped to introduce modern methods of treatment for mental diseases as soon as possible. The numbers of mental patients admitted to hospital are apparently low in relation to the population figures. This is partly explained by the fact that relatives are in general very well prepared to care for those who are mentally afflicted until such time as the patient becomes either so violent or is so irresponsible and untrustworthy as to constitute a danger to the community.

#### Travelling Dispensaries

The Motor Ambulance Dispensary operating from Jesselton continues to serve the needs of the immediate neighbourhood, as it operates to a distance of up to 20 miles from Jesselton. On the East Coast regular visits were paid to the more remote stations by launch. At the end of the year plans were well advanced for the completion, early in 1955, of a Travelling Dispensary to operate on the railway system from Jesselton.

#### Estate Hospitals and Dispensaries

The Labour Ordinance provides for employers of labour being required to furnish hospitals and medical supervision, care and treatment for their workers. All the larger estates and industrial concerns have dispensaries or small hospitals, and during the year there were 33 places of employment at which such medical facilities were provided. A scheme has been formulated to enable dressers for estates and other commercial enterprises (who are required to employ them under the terms of the Labour Ordinance) to be trained in the Government training



schools. So far only one employer has taken advantage of this scheme in which the training is offered free of charge.

### Staff

The Department is administered by a Director and a Deputy Director of Medical Services, with a Colony Matron and a Medical Accountant-Storekeeper at Headquarters in Jesselton. During the year the establishment of 12 medical officers in addition to the Colony Surgeon and the Dental Surgeon was under strength by reason of illness, retirement and transfers.

Teaching was continued by the W.H.O. sister-tutor project. A second tutor arrived in 1954, and a full course of training for dressers and nurses was firmly established. A W.H.O. Public Health sister-tutor was stationed in Jesselton throughout 1954. In addition to the training under the WHO scheme, classes were held throughout the year in the major hospitals. They were conducted by the Medical Officers, Matron and Nursing Sisters with the assistance of a private general practitioner. Teaching has been further supplemented by the valuable work done in this respect by a Laboratory Technician made available to the Colony by Australia, under the Colombo Plan. Ten probationary health inspectors have been training throughout the year, since March under the direction of a Health Inspector Tutor from New Zealand, who is also provided under the Colombo Plan.

### Returns from Operating theatre and Dental Departments

These will be found in appendices A and B respectively.

### Visitors

In January two Senior Nursing officials of the W.H.O. visited the Colony, and in the same month a distinguished Swiss hospital architect paid a short visit.

In April the President of the British Medical Association spent a short time in the Colony during the course of his Far Eastern tour.





In May the adviser in Pediatrics to the W.H.O. Western Pacific Region paid a visit.

A senior Surgeon of the Singapore General Hospital visited the Colony at the request of the Government in June, and in July an investigator into the decline of Muruts from the University of Malaya arrived. He was joined in September by a social anthropologist engaged in the same investigation. In September also the Medical Superintendent of the Woodbridge Mental Hospital in Singapore paid a visit to the Colony to advise on the treatment and welfare of mental patients.

In October a smallpox Consultant from the Western Pacific Region of WHO paid a visit, and in November the Resident Representative of the United Nations Childrens Fund. In December the adviser in environmental sanitation of the W.H.O. Western Pacific Region spent some time in the Colony.

#### Expenditure

The estimated expenditure on medical services from Colony funds in 1954 including personal emoluments, amounted to \$2,278,995. This figure refers to Medical Department expenditure only, and does not include sums spent in the towns on such municipal conservancy measures as scavenging, removal of night-soil and inspections by Sanitary Board officials within the urban areas. Neither does it include capital expenditure on new buildings nor the generous aid which the Colony continued to receive during the year under Colonial Development and Welfare Schemes, and from the United Nations International Childrens Emergency Fund, the World Health Organisation and Colombo Plan Technical Assistance.



APPENDIX A

MAJOR SURGICAL OPERATIONS PERFORMED DURING THE  
YEAR 1954 BY THE COLONY SURGEON AT JESSELTON  
HOSPITAL.

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Major Operations

261

Abdominal	110
Orthopaedic	24
Ano-rectal	24
Hernias	19
Tonsils	43
Cranial	4
Plastic	21
Neck	7
Varicose Veins	2
Parotid Gland	3
Breast	4

Minor Operations

759

Total

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1,020

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## APPENDIX B

### ANNUAL REPORT OF THE DENTAL SERVICE FOR 1954

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The Dental Department has provided for the past year, as in 1953, mainly an emergency service.

There have been increases in the numbers of patients attending, in nearly all the phases of dental treatment, but it is particularly gratifying to note the considerable increase in the amount of conservative work done.

1. STAFF:

Dental Surgeon. ....	1
Dresser attached from Medical Staff. ....	1
Dental Technician. ....	1
Probationer Nurse attached from Medical Staff. ....	1

2. EQUIPMENT:

The X-ray apparatus has been installed and proven invaluable. Most of the non-expendable equipment delivered during the year has been for the laboratory and this is now well equipped. Equipment ordered during the year included an air compressor, spot welder, and casting machine, and with the arrival of these it is expected that any usual procedure in dentistry can be attempted by this department.

3. SCOPE OF SERVICE:

The dental centre continues to be well patronised by school children from the various schools in Jesselton and from Kent College and the Trade School. Most of these complete their treatment which is now more of a conservative nature. One morning per week is reserved for expectant Mothers referred from the Health Centre.

Conservative treatment on adults has, of necessity, been mainly restricted to Europeans and better educated Asians by virtue of their better oral hygiene.



The generally poor condition of uneducated Asian and Indigent patients' mouths normally necessitates treatment by extraction. However, more and more Asians are now indicating their willingness to undergo oral rehabilitation, and fillings were possible.

Ranau and Labuan were visited during the year and as much inspection and treatment carried out as time permitted.

4. RECORDS OF TREATMENT PROVIDED:

Attendances included inspections.....	3,384
Number of teeth filled.....	654
Number of temporary teeth extracted.....	1,619
Number of permanent teeth extracted.....	1,960
Other operations including temporary fillings, orthodontic appliances, splints and surgical cases.....	463
Number of general anaesthetics administered .....	114
Number of partial dentures fitted.....	85
Number of full dentures fitted.....	50
Number of denture repairs, including relines.....	15
Number of X-ray films used .....	75





## APPENDIX C

A table showing the medical and health staff of the Colony, including Mission doctors and private medical practitioners is appended:--

	Government	Missions	Private
Registered Physicians	11	1	12
Nursing Sisters	6	3	1
Staff Nurses	14	--	--
Trained Nurses	16	--	--
Probationer Nurses	28	--	--
Government Hospital Assistants	9	--	--
Trained Dressers	77	--	52
Probationer Dressers	54	--	--
Certified Midwives	29	3	38
Health Inspectors Grade I	1	--	--
Probationary Health Inspectors	11	--	--
<hr/>			
	256	7	103
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S T A F F

APPENDIX D

	1950		1951		1952		1953		1954	
	Estab- lishment	Ac- tual	Vac- ancies	Estab- lishment	Ac- tual	Vac- ancies	Estab- lishment	Ac- tual	Vac- ancies	Estab- lishment
<u>SENIOR OFFICERS</u>										
Director of Medical Services	1	1	-	1	1	-	1	1	1	-
Deputy Director of Medical Services	1	1	-	1	1	-	1	1	1	-
Surgeon	1	1	-	1	1	-	1	1	1	-
Medical Officers	11	9	2	11	9	2	11	11	11	-
Health Officer	1	1	-	1	1	-	1	1	1	-
Dentist	1	1	-	1	1	-	1	1	1	-
Health Visitor	1	1	-	1	1	-	1	1	1	-
Accountant-Storekeeper	1	1	-	1	1	-	1	1	1	-
<u>SENIOR NURSING STAFF</u>										
Colony Matron	-	-	-	1	-	1	1	1	1	-
Nursing Sisters	6	5	1	6	5	1	6	6	6	2
<u>JUNIOR NURSING STAFF</u>										
Doctors - Special Grade	10	9	1	10	9	1	9	9	9	-
Staff Nurses	4	3	1	4	3	1	14	12	14	-
Dressers & Nurses	129	120	9	129	114	15	198	171	198	26
Midwives	12	4	8	12	3	9	12	3	1	-



	1950		1951		1952		1953	1954
	Estab- lish- ment	Ac- tu- al	Estab- lish- ment	Ac- tu- al	Estab- lish- ment	Ac- tu- al	Estab- lish- ment	Ac- tu- al
	Estab- lish- ment	Ac- tu- al	Estab- lish- ment	Ac- tu- al	Estab- lish- ment	Ac- tu- al	Estab- lish- ment	Ac- tu- al
<u>HEALTH STAFF</u>								
Health Inspector Special Grade	-	-	3	1	3	1	3	1
Health Inspector Vaccinators	-	-	6	-	6	1	12	11
Rat catcher	1	1	1	1	1	1	1	1
Village Health Inspectors	3	2	3	2	3	2	3	3
Anti-Mosquito Assistants	15	15	15	14	15	14	10	10
<u>MATERNITY &amp; CHILD WELFARE</u>	3	3	3	3	3	3	3	3
Staff Village Midwives	2	1	2	1	2	1	2	1
Village Midwives	29	18	29	24	29	20	29	16
<u>MISCELLANEOUS JUNIOR STAFF</u>								
Laboratory Assistant	-	-	-	-	-	-	1	-
Dental Mechanic	-	-	-	-	-	-	1	1
Attendants & Servants	159	157	169	156	169	162	169	176
Mandors	10	8	10	8	10	8	7	7
Messengers	6	6	6	6	6	6	6	6
Watchmen	6	4	6	6	7	6	7	7
Cooks at Hostels	3	2	3	3	3	3	3	3
Amahs at Hostels	3	2	3	3	3	3	3	3





Institutions (Government)		Number of institutions	Number of beds
1. Hospitals:			
(a) General hospitals (institutions equipped to deal adequately with all general medical and surgical cases).....		2	350
(b) Cottage hospitals or infirmaries (smaller institutions equipped to handle only lighter cases, more severe cases being referred to General Hospital).....		5	192
2. Dispensaries (institutions for treatment mainly of out-patients):			
(a) Exclusively for out-patients.....		11	-
(b) Having beds for lighter cases to be referred to General hospital.....		10	156
3. Specialized units:			
(a) Maternity and Child Welfare Centres.....	In General hospital	In dispensary	As separate unit
(b) Tuberculosis.....	-	-	2
(c) Venereal disease.....	2	-	-
(d) Leprosaria.....	-	-	-
(e) Mental institutions.....	-	-	1
(f) Others.....	-	-	1
			-
	Number of units	Total Staff	
4. Mobile units .....	1		2



## RETURN OF MORBIDITY AND MORTALITY FOR THE YEAR 1954

## 1. M.O.'S STATIONS

	Out-patients		In-patients
	New cases	Repeat cases	New cases admitted during the year.
Natives	20,510	13,281	3,327
Chinese	21,717	24,106	4,236
Others	4,489	4,894	1,692

## 2. OTHER STATIONS

	Out-patients		In-patients
	New cases	Repeat cases	New cases admitted during the year
Natives	106,147	41,602	2,256
Chinese	20,760	14,210	399
Others	4,555	4,763	150

TOTAL	177,956	102,856	12,060
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## 3. Patients seen at Ante-natal Clinics and not recorded in above or detailed Classification of disease.

	M.O.'s Stations	Other Stations	Total
(1) New Cases	920	262	1,182
(2) Repeat Cases	1,499	502	2,001

## 4. Travelling Clinics:

	M.O's Stations	Other Stations	Total
(1) New Cases	13,044	44,347	57,391

5. Operations:	M.O's Stations (including operations by the Colony Surgeon)	Other Stations	Total
(1) Major	792	-	792
(2) Minor	2,955	879	3,834

## 6. Vaccinations:

	M.O.'s Stations	Other Stations	Total
	10,253	5,629	15,882





RETURN OF MORBIDITY & MORTALITY FOR THE YEAR 1954.  
MEDICAL OFFICERS REPORTS FOR 7 MAJOR TOWNS  
IN THE COLONY.

Interme- diate List Number	Detailed List Numbers.	CAUSE GROUPS	Out-patient 1st Attend- ances.	In-patient Admitted.	Died in Hosp- ital
A 1	001-008	Tuberculosis of Res- piratory System	175	532	19
A 2	010	Tuberculosis of men- inges and central nervour system	-	6	3
A 3	011	Tuberculosis of intes- tines, peritoneum & mesenteric glands	1	6	-
A 4	012,013	Tuberculosis of bones and joints	7	2	-
A 5	014-019	Tuberculosis, all other forms	18	8	-
A 6	020	Congenital Syphilis	-	1	-
A 7	021	Early syphilis (Primary and Secondary)	7	2	-
A 8	024	Tabes dorsalis	-	1	-
A 9	025	General paralysis of insane	-	1	-
A 10	022,023) 026-029)	All other Syphilis	4	3	-
A 11	030-035	Gonococcal infections: (1) Acute (2) Other	22 8	10 6	- -
A 12	040	Typhoid Fever	-	5	1
A 13	041,042	Paratyphoid Fever and other Salmonella infections	-	1	-
A 14	043	Cholera	-	-	-
A 15	044	Brucellosis (undulant Fever)	-	-	-
A 16(a)	045	Bacillary Dysentery	-	11	-
(b)	046	Amoebiasis	104	135	4
(c)	047,048	Other unspecified forms of Dysentery	222	16	-
A 17	050	Scarlet Fever	-	-	-
A 18	051	Streptococcal sore throat	23	-	-
A 19	052	Erysipelas	2	7	-
A 20	053	Septicaemia and Praemia	-	2	1
A 21	055	Diphtheria	-	6	5
					/3



Interme- diate List Number	Detailed List Numbers	CAUSE GROUPS	Out-patient 1st Attend- ances.	In-patient Admitted	Died in Hosp- ital
A 22	056	Whooping Cough	14	1	1
A 23	057	Meningococcal infections	-	3	-
A 24	058	Plague	-	-	-
A 25	060	Leprosy	1	3	-
A 26	061	Tetanus	-	3	2
A 27	062	Anthrax	-	-	-
A 28	080	Acute Poliomyelitis	2	-	-
A 29	082	Acute infectious encephalitis	-	1	-
A 30	081,083	Late effects of acute Poliomyelitis and acute infectious encephalitis	-	3	-
A 31	084	Small-pox	-	-	-
A 32	085	Measles	15	9	-
A 33	091	Yellow Fever	-	-	-
A 34	092	Infectious hepatitis	2	23	-
A 35	094	Rabies	2	23	-
A 36(a)	100	Louse-borne epidemic typhus	-	-	-
(b)	101	Flea-borne endemic typhus (murine)	-	-	-
(c)	104	Tick-borne epidemic typhus	-	-	-
(d)	105	Mite-borne typhus	-	3	-
(e)	102-103) 106-108)	Other and unspecified typhus	1	5	-
A 37(a)	110	Vivax Malaria (benign tertian)	98	90	-
(b)	111	Malariae Malaria (quartan)	10	3	-
(c)	112	Falciparum Malaria (Malignant tertian)	255	249	9
(d)	115	Blackwater Fever	-	1	-
(e)	113,114) 116,117)	Other and unspecified forms of Malaria	4,060	506	17
A 38(a)	123.0	Schistosomiasis vesical (S. haematobium)	-	-	-
(b)	123.1	Schistosomiasis intes- tinal (S. mansoni)	-	-	-
(c)	123.3	Other & unspecified schistosomiasis	-	-	-
A 39	125	Hydatid Disease	-	-	-
A 40(a)	127	Onchocerciasis	-	-	-
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Interme- diate List Number	Detailed List Numbers	CAUSE GROUPS	Out-patient 1st Attend- ances	In-patient Admitted	Died in Hosp- ital.
A 40(b)		Loisais	-	-	-
(c)		Filariasis (bancrofti)	-	-	-
(d)		Other filariasis	3	1	-
A 41	129	Ankylostomiasis	491	59	-
A 42(a)	126	Tapeworm (infestation) and other cestode infestations	2	-	-
(b)	130.0	Ascariasis	1,124	74	2
(c)	130.3	Guinea worm (dracun- culosis)	-	-	-
(d)	124,128 130.1,130.2	Other diseases due to helminths	584	11	-
A 43(a)	037	Lymphogranuloma venereum	-	-	-
(b)	038	Granuloma inguinale, venereal	-	-	-
(a)	039	Other & unspecified venereal diseases	-	-	-
(d)	049	Food poisoning infection and intoxication	-	2	-
(e)	071	Relapsing Fever	-	-	-
(f)	072	Lentospirosis ictero- haemorrhagica (Weil's Disease)	-	-	-
(g)	073	Yaws	1,073	27	-
(h)	087	Chicken-pox	15	23	-
(i)	090	Dengue	-	1	-
(j)	095	Trachoma	5	2	-
(k)	096.7	Sandfly Fever	-	-	-
(l)	120	Leishmaniasis	-	-	-
(m)	121(a)	Trypanosomiasis gam- biensis	-	-	-
	(b)	Trypanosomiasis rhod- esienis	-	-	-
	(c)	Other and unspecified trypanosomiasis	-	-	-
(n)	131	Dermatophytosis (Kurap, etc.)	1,041	13	-
(o)	135	Scabies	340	4	-



Interme- diate List Number	Detailed List Numbers	CAUSE GROUPS	Out-patient 1st Attend- ances	In-patient Admitted	Died in Hosp- ital
A 43(p)	036, 054, ) 059, 063, ) 064, 070, ) 074, 086, ) 088, 089, ) 093, 096.1- 096.6, 096.8, ) 096.9, 122 ) 132-134, ) 136-138. ) 140-148	All other diseases     Classified as infec- tive and parasitic  Malignant neoplasm of buccal cavity and pharynx	59 - 43 - -	4 4 26 3	- - - 1
A 44					
A 45	150				
A 46	151	Malignant neoplasm of stomach	3	15	3
A 47	152, 153	Malignant neoplasm of intestine, except rec- tum	-	4	3
A 48	154	Malignant neoplasm of rectum	-	1	-
A 49	161	Malignant neoplasm of larynx	-	1	-
A 50	162, 163	Malignant neoplasm of trachea, and of bronchus and lung not specified as secondary	-	1	1
A 51	170	Malignant neoplasm of breast	-	1	-
A 52	171	Malignant neoplasm of cervix uteri	-	7	2
A 53	172-174	Malignant neoplasm of other and unspecified parts of uterus	-	11	1
A 54	177	Malignant neoplasm of prostate	-	-	-
A 55	190, 191	Malignant neoplasm of skin	1	4	-
A 56	196, 197	Malignant neoplasm of bone and connective tissue	-	3	2
A 57	155-160 ) 164, 165 ) 175, 176 ) 178-181 ) 192-195 ) 198, 199 )	Malignant neoplasm of all  Other and unspecified sites	8 3	31 7	4 2
A 58	204	Leukaemia and aleuka- emia	-	1	-





Interme- diate List Number	Detailed List Numbers	CAUSE GROUPS	Out-patient 1st Attend- ances	In-patient Admitted	Died in Hosp- ital
A 59	200-203, 205	Lymphosarcoma and other neoplasms & haematopoietic System	-	2	2
A 60	210-239	Benign neoplasms of unspecified nature	7	27	-
A 61	250,251	Nontoxic goitre	28	8	-
A 62	252	Thyrotoxicosis with or without goitre	2	5	2
A 63	260	Diabetes Mellitus	15	29	3
A 64(a)	280	Beri-beri	8	10	1
(b)	281	Pellagra	-	-	-
(c)	282	Scurvy	-	-	-
(d)	283-286	Other dificiency states	182	19	-
A 65(a)	290	Pernicious and other hyperchromic anaemias	2	2	-
(b)	291	Iron deficiency anaemias (hypochromic)	702	97	2
(c)	292,293	Other specified and unspecified anaemias	1,710	80	2
A 66(a)	241	Asthma	549	105	2
(b)	240	All other allergic disorders	74	10	-
	242-245)	Endocrine,	10	9	-
	253,254)	metabolic and blood	14	9	-
	270-277)	diseases			
	287-289)				
	294-299)				
A 67	300-309	Psychoses	-	55	1
A 68	310-324 ) 326 }	Psychoneuroses and disorders personality	2	13	-
A 69	325	Mental deficiency	2	54	-
A 70	330-334	Vascular lesions affec- ting central nervous system	-	6	1
A 71	340	Non-meningococcal Meningitis	-	6	2
A 72	345	Multiple sclerosis	-	-	-
A 73	353	Epilepsy	13	19	-
A 74	370-379	Inflammatory diseases of eye	1,045	104	-
A 75	385	Cataract	25	12	-
A 76	387	Glaucoma	-	1	-
A 77(a)	390	Otitis externa	455	17	-



Interme- diate List Number	Detailed List Numbers	CAUSE GROUPS	Out-patient 1st Attend- ances.	In-patient Admitted.	Died in Hosp- tal
A 77(b)	391-393	Otitis media and mas- toiditis	247	22	-
		Other inflammatory disease of ear	156	30	-
(c)	394	All other diseases and conditions of eye	263	71	-
A 78(a)	380-384)		2	2	-
	386,388)				
	389				
(b)	341,344)	All other diseases of	222	46	2
	350-352)	the nervous system			
	354-357)	and sense organs	138	5	1
	360-369)				
	395-398)				
A 79	400-402	Rheumatic Fever	5	5	-
A 80	410-416	Chronic rheumatic heart disease			
A 81	420-422	Arteriosclerotic and degenerative heart disease	1	4	1
A 82	430-434	Other diseases of heart	14	41	5
A 83	440-443	Hypertension with heart disease	-	4	1
A 84	444-447	Hypertension without mention of heart	5	14	5
A 85	450-456	Diseases of arteries	2	2	1
A 86	460-468	Other diseases of circulatory system	131	93	4
A 87	470-475	Acute upper respiratory infections	1,815	58	-
A 88	480-483	Influenza	3,205	52	1
A 89	490	Lobar pneumonia	4	44	1
A 90	491	Bronchopneumonia	21	133	24
A 91	492,493	Primary a typical, other and unspecified pneumonia	694	425	12
A 92	500	Acute bronchitis	1,063	135	-
A 93	501,502	Bronchitis, chronic & unqualified	1,516	157	1
A 94	510	Hypertrophy of ton- sils & adenoids	274	111	-
A 95	518,521	Empyema and abscess of lung	-	3	1
A 96	519	Pleurisy	5	9	-
A 97(a)	523	Pneumoconiosis	4	1	-
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Interme- diate List Number	Detailed List Numbers	CAUSE GROUPS	Out-patient 1st Attend- ances.	In-patient Admitted	Died in Hosp- ital
A 97(b)	511-517) 520-522) 524-527)	All other respiratory diseases	556	121	2
A 98(a)	530	Dental Caries	998	28	-
A 99(b)	531-535	All other diseases of teeth and supporting structures	326	21	-
	540	Ulcer of stomach	-	8	-
A 100	541	Ulcer of duodenum	1	12	1
A 101	543	Gastritis and duodenitis	686	51	1
A 102	550-553	Appendicitis	8	77	1
A 103	560, 561) 570 )	Intestinal obstruction and hernia	41	44	6
A 104(a)	571.0	Gastro-enteritis and colitis between 4 weeks and 2 years	532	66	9
(b)	571.1	Gastro-enteritis and colitis, ages 2 years and over	781	87	1
(c)	572	Chronic enteritis & ulcerative colitis	67	33	5
A 105	581	Cirrhosis of liver	-	30	6
A 106	584, 585	Cholelithiasis and cholecystitis	4	8	1
A 107	536-539) 542, 544) 545 ) 573-580) 582, 583) 586, 587)	Other diseases of digestive system . . . . . . .	1,338 119 - - - .	201 7 2 3	8 - - - .
A 108	590	Acute nephritis	12	31	8
A 109	591-594	Chronic, other and unspecified nephritis	6	9	3
A 110	600	Infections of kidney	12	18	-
A 111	602, 604	Calculi of urinary system	-	14	-
A 112	610	Hyperplasia of prostate	-	-	-
A 113	620, 621	Diseases of breast	19	9	-
A 114(a)	613	Hydrocele	3	1	-
(b)	634	Disorders of menstru- ation	105	39	-
(c)	601, 603) 605-609) 611, 612) 614-617) 622-633) 635-637)	All other diseases of the Genito-urinary system	- 198	3 129	- 1

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Intermediate List Number	Detailed list Numbers	CAUSE GROUPS	Out-patient 1st Attend-ances	In-patient Admitted	Died in Hospital
A 115	640-641)	Sepsis of pregnancy, childbirth and the puerperium	-	6	-
	684				
A 116	642,652)	Toxaemias of pregnancy and the puerperium	7	12	2
	685,686)				
A 117	643,664)	Haemorrhage of pregnancy & Childbirth	11	22	3
	670-672)				
A 118	650	Abortion without mention of sepsis or toxaemia	13	128	-
A 119	651	Abortion with sepsis	-	10	-
A 120(a)	645-649)	Other complications of pregnancy, childbirth and the puerperium	5	97	11
	673-680)				
	683 )				
	687-689)	.....	-	1	-
(b)	660	Delivery without complications	5	912	-
A 121	690-698	Infections of skin and subcutaneous tissue	1,846	342	-
A 122	720-725	Arthritis and spondylitis	129	55	-
A 123	726,727	Muscular rheumatism and rheumatism unspecified	807	45	-
A 124	730	Osteomyelitis and periostitis	8	22	-
A 125	737 )	Ankylosis and acquired musculo-skeletal deformities	-	5	-
	745-749)		-	2	1
A 126(a)	715	Chronic ulcer of skin (including tropical ulcer)	2,080	86	-
(b)	700-714)	All other diseases of skin	2,409	194	-
	716)				
(c)	731-736)	All other diseases of musculo-skeletal system	9	6	-
	738-744)				
A 127	751	Spina bifida and meningocele	-	-	-
A 128	754	Congenital malformations of circulatory system	3	2	1
A 129	750,752)	All other congenital malformations	1	6	-
	753 )				
	755-759)	.....	-	1	-
A 130	760,761	Birth injuries	2	3	1
A 131	762	Post-natal asphyxia and atelectasis	-	-	-
A 132(a)	764	Diarrhoea of new-born (under 4 weeks)	6	-	-





Intermediate List Number	Detailed List Numbers	CAUSE GROUPS	Out-patient 1st Attendances	In-patient Admitted	Died in Hospital
A 132(b)	765	Ophthalmia neonatorum	-	2	1
(c)	763, 766-768)	Other infections of newborn	6	5	4
A 133	770	Haemolytic disease of new-born	-	-	-
A 134	769 771,772)	All other defined diseases of early infancy	1	24	13
A 135	773,776	Ill-defined diseases peculiar to early infancy, and immaturity unqualified	3	5	1
A 136	794	Senility without mention of psychosis	18	28	2
A 137(a)	788.8	Pyrexia of unknown origin	2,120	43	-
(b)	793	Observation, without need for further medical care	347	527	-
(c)	780-787) 788.1- 788.7 789.9 789-792) 795	All other ill-defined causes of morbidity	2,030	121	5

"E" CODE, ALTERNATIVE CLASSIFICATION OF ACCIDENTS, POISONINGS, AND VIOLENCE (EXTERNAL CAUSE).

Intermediate List Number	Detailed List Numbers	CAUSE GROUPS	Out-patient 1st Attendances.	In-patient Admitted	Died in Hospital
AE 138	E810-E835	Motor vehicle accidents	19	40	5
AE 139	E800-E802) E840-E866)	Other transport accidents	103	21	1
AE 140	E870-E895	Accidental poisoning	-	12	5
AE 141	E900-E904	Accidental falls	639	164	3
AE 142	E912	Accident caused by machinery	61	39	1
AE 143	E916	Accident caused by fire and explosion of combustible material	9	10	1



Intermediate List Number	Detailed List Numbers	CAUSE GROUPS	Out-patient 1st Attend-ances.	In-patient Admitted	Died in Hospital
AE 144	E917,E918	Accident caused by hot substance corrosive liquid, steam and radiation	150	53	6
AE 145	E919	Accident caused by firearm	-	3	-
AE 146	E929	Accidental drowning & submersion	17	2	-
AE 147	(a)E920	Foreign body entering eye and adnexa	33	12	-
	(b)E923	Foreign body entering other orifice	45	16	-
	(c)E927	Accidents caused by bites and stings of venomous animals and insects	122	32	-
	(d)E928	Other accidents caused by animals	35	13	-
	e)E910,E911) E913-E915) E921-E922) E924-E926) E930-E965) E970-E979)	All other accidental causes	1,891	508	3
AE 148		Suicide and Self-inflicted injury	-	3	1
AE 149	E980-E985	Homicide & Injury purposely inflicted by other persons (not in war)	-	4	-
AE 150	E990-E999	Injury resulting from operations of war	-	-	-

"N" CODES. ALTERNATIVE CLASSIFICATION OF ACCIDENTS, POISONINGS, AND VIOLENCE (NATURE OF INJURY)

Intermediate List Number	Detailed List Numbers.	CAUSE GROUPS	Out-patient 1st Attend-ances	In-patient Admitted	Died in Hospital
AN 138	N800-N804	Fracture of skull	-	20	6
AN 139	N805-N809	Fracture of spine & trunk	2	22	3
AN 140	N810-N829	Fracture of limbs	46	140	1
AN 141	N830-N839	Dislocation without Fracture	31	14	-
					/12





Interme- diate List Number	Detailed List Numbers	CAUSE GROUPS	Out-patient 1st Attend- ances	In-patient Admitted	Died in Hosp- ital
AN 142	N840-N848	Sprains and strains of joints and ad- jacont muscle	430	43	-
AN 143	N850-N856	Head injury (exclu- ding fracture)	1	24	1
AN 144	N860-N869	Internal injury of chest, abdomen, and pelvis	-	9	3
AN 145	N870-N908	Laceration and open wounds	1,138	408	2
AN 146	N910-N929	Superficial injury, contusion and crush- ing with intact skin surface	1,086	152	-
AN 147	N930-N936	Effects of foreign body entering through orifice	98	21	-
AN 148	N940-N949	Burns	153	63	7
AN 149	N960-N979	Effects of Poisons	17	7	1
AN 150	N950-N959)	All other and unspeci- fied effects of ex- ternal causes	120	18	-





